COMPUTER SERVICE TECHNICIAN
Computer Service Technician - Level I
85705JA

TRAINING ACHIEVEMENT RECORD (TAR) FOR:

Name:

SSN:

Date Entered Training:

O Completed or O Terminated Training Date:

JOB CORPS CENTER:

Address:

Phone:

Instructor:

PREREQUISITE: None

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
A. Employability Skills			_____	_____
1. Demonstrate the ability to dress properly for work.	1 2 3	_____		
2. Demonstrate the ability to arrive for work on time.	1 2 3	_____		
3. Demonstrate the ability to respond properly to supervision.	1 2 3	_____		
4. Demonstrate the ability to work within and understand a chain of command.	1 2 3	_____		
5. Demonstrate the ability to follow directions.	1 2 3	_____		
6. Demonstrate the ability to listen effectively and to ask for help when further information is required.	1 2 3	_____		
7. Demonstrate the ability to share information and explain procedures to another person.	1 2 3	_____		
8. Demonstrate the ability to take initiative.	1 2 3	_____		
9. Demonstrate the ability to satisfy customers.	1 2 3	_____		
10. Demonstrate the ability to work as a member of a team.	1 2 3	_____		

1 - Exposed/not proficient; 2 - Proficient; 3 - Proficient and able to teach others (for further explanation, see the directions page at the end of this document)

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
11. Demonstrate the ability to work well with diverse races, sexes, ages and cultures.	1 2 3	_____		
12. Demonstrate the ability to troubleshoot and solve problems.	1 2 3	_____		
13. Demonstrate the ability to access and use information from manuals, computers, and manufacturers.	1 2 3	_____		
14. Demonstrate the ability to maintain good hygiene.	1 2 3	_____		
15. Demonstrate the ability to stay on task.	1 2 3	_____		
16. Demonstrate the ability to maintain tools and equipment properly.	1 2 3	_____		
B. Safety			_____	_____
1. Understand and use basic safety principles and procedures when working on personal computer equipment.				
a. no watches or jewelry when working on equipment.	1 2 3	_____		
b. wear goggles when soldering.	1 2 3	_____		
c. no food or drink around computers.	1 2 3	_____		
d. do not remove components when power supply is turned on.	1 2 3	_____		
e. maintain a clean and organized work space.	1 2 3	_____		
2. Understand and use appropriate grounding procedures to avoid damaging personal computer components with static electricity.	1 2 3	_____		
C. Tools and Test Equipment				
1. Understand the names and uses of tools and test equipment needed to troubleshoot and service personal computers.	1 2 3	_____	_____	_____
D. Installation, configuration, and Upgrading				
1. Identify the names, purpose, and characteristics, of system modules. Recognize these modules by sight or definition..			_____	_____
a. Motherboard	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
b. Firmware	1 2 3	_____		
c. Power Supply	1 2 3	_____		
d. Processor / CPU	1 2 3	_____		
e. Memory	1 2 3	_____		
f. Storage Devices	1 2 3	_____		
g. Display Devices	1 2 3	_____		
h. Adapter Cards	1 2 3	_____		
i. Ports	1 2 3	_____		
j. Cases	1 2 3	_____		
2. Identify basic procedures for adding and removing field replaceable modules for desktop systems. Given a replacement scenario, choose the appropriate sequences.			_____	_____
a. Motherboard	1 2 3	_____		
b. Storage devices (FDD, HDD, CD/CDRW, DVD/DVDRW)	1 2 3	_____		
c. Tape drive, Removable storage	1 2 3	_____		
d. Power supply (AC adapter, AT/ATX)	1 2 3	_____		
e. Cooling systems (Fans, Heat sinks, Liquid cooling)	1 2 3	_____		
f. Processor / CPU	1 2 3	_____		
g. Memory	1 2 3	_____		
h. Display device	1 2 3	_____		
i. Input devices (Keyboard, Mouse/pointer devices, Touch screen)	1 2 3	_____		
j. Adapters (NIC, Sound Card, Video card, Modem, SCSI, IEEE 1394/Firewire, USB)	1 2 3	_____		
3. Identify basic procedures for adding and removing field replaceable modules for portable systems. Given a replacement scenario, choose the appropriate.			_____	_____

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
a. Storage devices (FDD, HDD, CD/CDRW, DVD?DVDRW, Removable storage)	1 2 3	_____		
b. Power sources (AC adapter, DC adapter, Battery)	1 2 3	_____		
c. Memory	1 2 3	_____		
d. Input devices (Keyboard, Mouse/pointer devices, Touch screen)	1 2 3	_____		
e. PCMCIA/Mini PCI Adapters (NIC, Modem, SCSI, IEEE 1394/Firewire, USB)	1 2 3	_____		
f. Docking station / port replicators	1 2 3	_____		
g. LCD panel	1 2 3	_____		
4. Identify typical IRQs, DMAs, and I/O addresses and procedures for altering these settings when installing and configuring devices. Choose the appropriate installation or configuration setups in a give scenario.			_____	_____
a. Legacy devices (e.g., ISA sound card)	1 2 3	_____		
b. Specialized devices (e.g., CAD/CAM)	1 2 3	_____		
c. Internal modems	1 2 3	_____		
d. Floppy drive controllers	1 2 3	_____		
e. Hard drive controllers	1 2 3	_____		
f. Multimedia devices	1 2 3	_____		
g. NICs	1 2 3	_____		
h. I/O ports (Serial, Parallel, USB, IEEE 1394/Firewire, Infrared)	1 2 3	_____		
5. Identify the names, purposes, and performance characteristics of standardized/common peripheral ports, associated cabling, and their connectors. Recognize ports, cabling, and connectors by sight.			_____	_____
a. Port types (Serial, Parallel, USB, IEEE 1394, Infrared)	1 2 3	_____		
b. Cable types (Serial, Parallel, USB, IEEE 1394)	1 2 3	_____		
c. Connector types				

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
1). Serial (DB-9, DB-25, RJ-11, RJ-45)	1	2	3	_____		
2). Parallel (DB-25, Centronics)	1	2	3	_____		
3). PS2/Mini-DIN	1	2	3	_____		
4). USB	1	2	3	_____		
5). IEEE 1394/Firewire	1	2	3	_____		
6. Identify proper procedures for installing and configuring common IDE devices. Choose the appropriate installation or configuration sequences in given scenarios. Recognize the associated cables.					_____	_____
a. IDE interface types (EIDE, ATA/ATAPI, Serial ATA, PIO)	1	2	3	_____		
b. RAID (0, 1, and 5)	1	2	3	_____		
c. Master / Slave / Cable select	1	2	3	_____		
d. Devices per channel	1	2	3	_____		
e. Primary / Secondary	1	2	3	_____		
f. Cable Orientation / Requirements	1	2	3	_____		
7. Identify proper procedures for installing and configuring common SCSI devices. Choose the appropriate installation or configuration sequences in given scenarios. Recognize the associated cables.					_____	_____
a. SCSI Interface types (Narrow, Fast, Wide, Ultra-wide, LVD, HVD)	1	2	3	_____		
b. Internal versus external	1	2	3	_____		
c. SCSI IDs (Jumper block / DIP switch, ID Conflicts)	1	2	3	_____		
d. RAID (0, 1, and 5)	1	2	3	_____		
e. Cabling (length, type termination requirements)	1	2	3	_____		
8. Identify proper procedures for installing and configuring common peripheral devices. Choose the appropriate installation or configuration sequences in given scenarios.					_____	_____
a. Modems and transceivers (dial-up, cable, DSL, ISDN)	1	2	3	_____		
b. External storage	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
c. Digital cameras	1 2 3	_____		
d. PDAs	1 2 3	_____		
e. Wireless access points	1 2 3	_____		
f. Infrared devices	1 2 3	_____		
g. Printers	1 2 3	_____		
h. UPS	1 2 3	_____		
9. Identify procedures to optimize PC operations in specific situations. Predict the effects of specific procedures under given scenarios.			_____	_____
a. Cooling systems (Liquid, Air, Heat sink, Thermal compound)	1 2 3	_____		
b. Disk subsystems enhancements (Hard drives, controller card cables)	1 2 3	_____		
c. NICs	1 2 3	_____		
d. Specialized video cards	1 2 3	_____		
e. Memory	1 2 3	_____		
f. Additional processors	1 2 3	_____		
g. Disk management (Temp/swap file, Defrag)	1 2 3	_____		
10. Determine the issues that must be considered when upgrading a PC. In a given scenario determine when and how to upgrade system components.			_____	_____
a. Drivers for legacy devices	1 2 3	_____		
b. Bus types and characteristics	1 2 3	_____		
c. Cache in relationship to motherboards	1 2 3	_____		
d. Memory capacity and characteristics	1 2 3	_____		
e. Processor speed and compatibility	1 2 3	_____		
f. Hard drive capacity and characteristics	1 2 3	_____		
g. System / firmware limitations	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
11. Upgrading components					_____	_____
a. Motherboards	1	2	3	_____		
b. Memory	1	2	3	_____		
c. Hard drives	1	2	3	_____		
d. CPU	1	2	3	_____		
e. BIOS	1	2	3	_____		
f. Adapter cards	1	2	3	_____		
g. Laptop power sources (Lithium Ion, NiMH, Fuel Cell)	1	2	3	_____		
h. PCMCIA type I, II, III cards	1	2	3	_____		
E. Installation, configuration, and upgrading						
1. Recognize common problems associated with each module and their symptoms, and identify steps to isolate and troubleshoot the problems. Given a problem situation, interpret the symptoms and infer the most likely cause.					_____	_____
a. I/O ports and cables (Serial, Parallel, USB, IEEE 1394, Infrared)	1	2	3	_____		
b. Motherboards (CMOS / BIOS settings, POST error codes)	1	2	3	_____		
c. Peripherals	1	2	3	_____		
d. Computer case (Power supply, slot cover)	1	2	3	_____		
e. Storage devices and cables (FDD, HDD, CD/CDRW, DVD/DVDRW, Tape Drive, Removable storage)	1	2	3	_____		
f. Cooling systems (Fans, Heat sinks, Liquid cooling, Temperature Sensors)	1	2	3	_____		
g. Processor / CPU	1	2	3	_____		
h. Memory	1	2	3	_____		
i. Display device	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
j. Input devices (keyboard, mouse/pointer device, Touch screen)	1	2	3	_____		
k. Adapters (NIC, sound card, video card, modem, SCSI, IEEE 1394 / Firewire, USB)	1	2	3	_____		
2. Identify basic troubleshooting procedures and tools and how to elicit problem symptoms from customers. Justify asking particular questions in a given scenario.					_____	_____
a. Troubleshooting / isolation / problem determination procedures	1	2	3	_____		
b. Determining whether a hardware or software problem	1	2	3	_____		
c. Gathering information from the user						
1) Customer Environment	1	2	3	_____		
2) Symptoms / Error Codes	1	2	3	_____		
3) Situation when the problem occurred.	1	2	3	_____		
F. PC Preventative Maintenance, Safety, and Environment Issues						
1. Identify the various types of preventive maintenance measures, products, and procedures and when and how to use them.					_____	_____
a. Liquid cleaning compounds.	1	2	3	_____		
b. Types of materials to clean contacts and connections	1	2	3	_____		
c. Non-static vacuums (chassis, power supplies, fans)	1	2	3	_____		
d. Cleaning removable media devices	1	2	3	_____		
e. Ventilation, dust and moisture control on the PC hardware interior	1	2	3	_____		
f. Hard disk maintenance (defragging, scan disk, CHKDSK)	1	2	3	_____		
g. Verify UPS and suppressors	1	2	3	_____		
2. Identify various safety measures and procedures and when/how to use them.					_____	_____
a. ESD precautions and procedures	1	2	3	_____		
b. High voltage equipment	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
c. Power supply	1 2 3	_____		
d. CRTs	1 2 3	_____		
3. Identify environmental protection measures and procedures and when/how to use them.			_____	_____
a. Batteries	1 2 3	_____		
b. CRTs	1 2 3	_____		
c. Chemical solvents and cans	1 2 3	_____		
d. MSDS (Material Safety Data Sheet)	1 2 3	_____		
G. Motherboard / Processors / Memory				
1. Distinguish between the popular CPU chips in terms of their basic characteristics.			_____	_____
a. Popular CPU chips (Pentium class compatible)	1 2 3	_____		
b. Voltage	1 2 3	_____		
c. Speeds (actual vs. advertised)	1 2 3	_____		
d. Cache level I, II, III	1 2 3	_____		
e. Sockets / slots	1 2 3	_____		
2. Identify the types of RAM, form factors, and operational characteristics. Determine banking and speed requirements under given scenarios.			_____	_____
a. Types (EDO RAM, DRAM, SRAM, VRAM, SDRAM, DDR, RAMBUS)	1 2 3	_____		
b. Form factors (SIMM, DIMM, SoDIMM, MicroDIMM, RIMM)	1 2 3	_____		
c. Operational characteristics (Memory chips, Parity, ECC, single vs. double-sided)	1 2 3	_____		
3. Identify the most popular types of motherboards, their components, and their architecture (bus structures).			_____	_____
a. Types (AT, XT, ATX)	1 2 3	_____		
b. Components				

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
1). Communication ports (Serial, USB, Parallel, IEEE 1394/Firewire, Infrared)	1	2	3	_____		
2). Memory (SIMM, DIMM, RIMM, SoDIMM, MicroDIMM)	1	2	3	_____		
3). Processor sockets (Slot 1, Slot 2, Slot A, Socket A, Socket 7, Socket 423, Socket 478, Socket 370)	1	2	3	_____		
c. Bus Architecture (ISA, PCI, AGP, USB, AMR, CNR)	1	2	3	_____		
d. Basic compatibility guidelines	1	2	3	_____		
e. IDE (ATA, ATAPI, ULTRA-DMA, EIDE)	1	2	3	_____		
f. SCSI (Narrow, Wide, Fast, Ultra, HVD, LVD)	1	2	3	_____		
g. Chipsets	1	2	3	_____		
4. Identify the purpose of CMOS memory, what it contains, and how and when to change its parameters. Given a scenario involving CMOS, choose the appropriate course of action.					_____	_____
a. Default settings	1	2	3	_____		
b. CPU settings	1	2	3	_____		
c. Printer parallel port (Uni., bi-directional, ECP, EPP)	1	2	3	_____		
d. COM/serial port (memory address, interrupt request, disable)	1	2	3	_____		
e. Floppy drive (enable/disable drive or boot, speed, density)	1	2	3	_____		
f. Hard drive (size and drive type)	1	2	3	_____		
g. Memory (speed, parity, non-parity)	1	2	3	_____		
h. Boot sequence	1	2	3	_____		
i. Date / Time	1	2	3	_____		
j. Passwords	1	2	3	_____		
k. Plug & Play BIOS	1	2	3	_____		
l. Disabling on-board devices	1	2	3	_____		
m. Disabling virus protection	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
n. Power management	1 2 3	_____		
H. Printers		_____	_____	
1. Identify printer technologies, interfaces, and options / upgrades.				
a. Technologies (Laser, Inkjet, Dot Matrix, Solid Ink, Thermal)	1 2 3	_____		
b. Interfaces (Parallel, Network, USB, Infrared, Serial, IEEE 1394/Firewire, Wireless)	1 2 3	_____		
c. Options / Upgrades (Memory, Hard Drives, NICs, Trays and feeders, Finishers, Scanner / Fax / Copier, Batteries)	1 2 3	_____		
2. Recognize common printer problems and techniques used to resolve them.				
a. Printer drivers	1 2 3	_____		
b. Firmware updates	1 2 3	_____		
c. Paper feed and output	1 2 3	_____		
d. Calibrations	1 2 3	_____		
e. Printing test pages	1 2 3	_____		
f. Errors	1 2 3	_____		
g. Memory	1 2 3	_____		
h. Configuration	1 2 3	_____		
i. Network connections	1 2 3	_____		
j. Connections	1 2 3	_____		
k. Paper jams	1 2 3	_____		
l. Print quality	1 2 3	_____		
m. Safety precautions	1 2 3	_____		
n. Preventative maintenance	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
o. Consumables	1 2 3	_____		
p. Environment	1 2 3	_____		
I. Basic Networking			_____	_____
1. Identify the common types of network cables, their characteristics and connectors.				
a. Cable types (Coaxial, Plenum/PVC, UTP, STP, Fiber)	1 2 3	_____		
b. Connector types (BNC, RJ-45, AUI, ST/SC, IDC/UDC)	1 2 3	_____		
2. Identify basic networking concepts.				
a. Installing and configuring network cards	1 2 3	_____		
b. Addressing	1 2 3	_____		
c. Bandwidth	1 2 3	_____		
d. Status indicators	1 2 3	_____		
e. Protocols (TCP/IP, IPX/SPX, AppleTalk, NETBEUI/NETBIOS)	1 2 3	_____		
f. Full-duplex, half-duplex	1 2 3	_____		
g. Cabling (Twisted Pair, Coaxial, Fiber Optic, RS-232)	1 2 3	_____		
h. Networking Models (Peer-to-peer, Client/server)	1 2 3	_____		
i. Infrared	1 2 3	_____		
j. Wireless	1 2 3	_____		
3. Identify common technologies available for establishing internet connectivity and their characteristics.				
a. LAN	1 2 3	_____		
b. DSL	1 2 3	_____		
c. Cable	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
d. ISDN	1 2 3	_____		
e. Dial-up	1 2 3	_____		
f. Satellite	1 2 3	_____		
g. Wireless	1 2 3	_____		
h. Characteristics (Definition, Speed, Connections)	1 2 3	_____		
J. Certification				
1. Pass CompTIA A+ Core (Hardware) to move to level 2	1 2 3	_____	_____	_____
2. Pass Brainbench Computer Technical Support to Stop at Level 1	1 2 3	_____	_____	_____
K. (Optional Employer Specific Skills)				
1. _____	1 2 3	_____	_____	_____
2. _____	1 2 3	_____	_____	_____
3. _____	1 2 3	_____	_____	_____
4. _____	1 2 3	_____	_____	_____

Train for Your FUTURE Job Corps

COMPUTER SERVICE TECHNICIAN
Computer Service Technician - Level II
85705JB

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
A. Operating System Fundamentals			_____	_____
1. Identify the major desktop components and interfaces, and their functions. Differentiate the characteristics of Windows 9x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and windows XP.				
a. Contrasts between Windows 9x/ME, Windows NT, Windows 2000 and XP.	1 2 3	_____		
b. Major operating system components (registry, Virtual Memory, File System)	1 2 3	_____		
c. Major operating system interfaces.				
1. Windows Explorer	1 2 3	_____		
2. My Computer	1 2 3	_____		
3. Control Panel	1 2 3	_____		
4. Computer Management Console	1 2 3	_____		
5. Accessories/System Tools	1 2 3	_____		
6. Command line	1 2 3	_____		
7. Network Neighborhood / My Network Places	1 2 3	_____		
8. Task Bar / systray	1 2 3	_____		
9. Start Menu	1 2 3	_____		
2. Identify the names, locations, purposes, and contents of major system files.				
a. Io.sys	1 2 3	_____		

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DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
b. MSDOS.sys	1	2	3	_____		
c. Autoexec.bat	1	2	3	_____		
d. Command.com	1	2	3	_____		
e. Config.sys	1	2	3	_____		
f. HIMEM.SYS	1	2	3	_____		
g. EMM386.exe	1	2	3	_____		
h. win.com	1	2	3	_____		
i. SYSTEM.INI	1	2	3	_____		
j. WIN.INI	1	2	3	_____		
k. Registry data files	1	2	3	_____		
l. System.dat	1	2	3	_____		
m. User.dat	1	2	3	_____		
n. BOOT.INI	1	2	3	_____		
o. NTLDR	1	2	3	_____		
p. NTDETECT.COM	1	2	3	_____		
q. NTBOOTDD.SYS	1	2	3	_____		
r. NTUSER.DAT	1	2	3	_____		
3. Demonstrate the ability to use command-line functions and utilities to manage the operating system including the proper syntax and switches.						
a. Command / CMD, Delete/Rename, EDIT, DELTREE	1	2	3	_____		
b. SCANDISK, DEFRAG, SCANREG, VER, SETVER, SET	1	2	3	_____		
c. DIR, ATTRIB, MEM, XCOPY, COPY, TYPE, ECHO	1	2	3	_____		
d. FORMAT, FDISK, MD/CD/RD	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
4. Identify basic concepts and procedures for creating, viewing and managing disks, directories and files. This includes procedures for changing file attributes. This includes procedures for changing file attributes and the ramifications of those changes.						
a. Disk Partitions (Active, Primary, Extended, Logical)	1	2	3	_____		
b. Disk File Systems (FAT16, FAT32, NTFS4, NTFS5.x)	1	2	3	_____		
c. Directory structures (Create folders, Navigate, Maximum Depth)	1	2	3	_____		
d. File naming conventions	1	2	3	_____		
e. File attributes (Read only, Hidden, System, and Archive)	1	2	3	_____		
f. File compression	1	2	3	_____		
g. File Encryption	1	2	3	_____		
h. File Permissions	1	2	3	_____		
i. File Types	1	2	3	_____		
5. Identify the major Operating System Utilities, their purpose, location and available switches.						
a. Disk Management Tools (Defrag.exe, Fdisk.exe, Backup/Restore Utility, ScanDisk, CHKDSK, Disk Cleanup, Format)	1	2	3	_____		
b. System Management Tools (Device Manager, System Manager, Computer, MSCONFIG, REGEDIT, REGEDIT32, SYSEDIT, SCANREG, COMMAND/CMD, Event Viewer, Task Manager)	1	2	3	_____		
c. File Management Tools (ATTRIB, EXTRACT, EDIT, WINDOWS EXPLORER)	1	2	3	_____		
B. Installation, Configuration, and Upgrading					_____	_____
1. Identify the procedures for installing Windows 9x/ME, NT 4.0 Workstation, 2000 Professional, and XP and bringing the operating system to a basic operational level.						
a. Verify hardware compatibility and minimum requirements	1	2	3	_____		
b. Determine OS installation options (Installation type - typical, custom, other, Network configuration, File system type, Dual Boot Support)	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
c. Disk preparation order (Start the installation, Partition, Format Drive)	1 2 3	_____		
d. Run appropriate setup utility (Setup Winnt)	1 2 3	_____		
e. Installation methods (Bootable CD, Boot floppy, Network installation, Drive imaging)	1 2 3	_____		
f. Device Driver Configuration (Load default drivers, Find updated drivers)	1 2 3	_____		
g. Restore user data files (if applicable)	1 2 3	_____		
h. Identify common symptoms and problems	1 2 3	_____		
2. Identify steps to perform an operating system upgrade from Windows 9x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP. Given an upgrade scenario, choose the appropriate next steps.				
a. Upgrade paths available	1 2 3	_____		
b. Determine correct upgrade startup utility (e.g. WINNT32 vs. WINNT)	1 2 3	_____		
c. Verify hardware compatibility and minimum requirements	1 2 3	_____		
d. Apply OS service packs, patches, and updates	1 2 3	_____		
e. Install additional Windows components	1 2 3	_____		
3. Identify the basic system boot sequences and boot methods, including the steps to create an emergency boot disk with utilities installed for Windows 9x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP.				
a. Boot Sequence (Files required to boot, Boot steps)	1 2 3	_____		
b. Alternative Boot Methods (Using a startup disk, Safe mode, Last known good configuration, command prompt mode, booting a system restore point, recovery console, Boot.ini switches, Dual boot)	1 2 3	_____		
c. Creating Emergency Disks with OS utilities	1 2 3	_____		
d. Creating emergency repair disk (ERD)	1 2 3	_____		
4. Identify procedures for installing/adding a device, including loading/adding/configuring device drivers, and required software.				

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
a. Device Driver Installation (PNP and non-PNP, Install and configure device drivers, Install different device drivers, Manually install a device driver, search the internet for updated device drivers, using unsigned drivers)	1	2	3	_____		
b. Install Additional Windows components	1	2	3	_____		
c. Determine if permissions are adequate for performing the task	1	2	3	_____		
5. Identify procedures necessary to optimize the operating system and major operating system subsystems.						
a. Virtual Memory Management	1	2	3	_____		
b. Disk Defragmentation	1	2	3	_____		
c. Files and Buffers	1	2	3	_____		
d. Caches	1	2	3	_____		
e. Temporary file management	1	2	3	_____		
C. Diagnostics and Troubleshooting					_____	_____
1. Recognize and interpret the meaning of common error codes and startup messages from the boot sequence, and identify steps to correct the problems.						
a. Boot failure and errors (Invalid boot disk, Inaccessible boot device, Missing NTLDR, Bad or missing Command interpreter)	1	2	3	_____		
b. Startup messages (Error in CONFIG.SYS line XX, Himem.sys not loaded, Missing or corrupt Himem.sys, Device/Service has failed to start)	1	2	3	_____		
c. A device referenced in SYSTEM.INI, WIN.INI, Registry is not found	1	2	3	_____		
d. Event Viewer - Event log is full	1	2	3	_____		
e. Failure to start GUI	1	2	3	_____		
f. Windows Protection Error	1	2	3	_____		
g. User-modified settings cause improper operation at startup	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
h. Using the correct Utilities (Dr. Watson, Boot Disk, Event Viewer)	1	2	3	_____		
2. Recognize when to use common diagnostic utilities and tools. Given a diagnostic scenario involving one of these utilities or tools, select the appropriate steps needed to resolve the problem.						
a. Startup disks (Required files for a boot disk, Boot disk with CD-ROM support)	1	2	3	_____		
b. Startup modes (Safe mode, Safe mode with command prompt, Safe mode with networking, Step-by-step/Single step mode, Automatic skip driver)	1	2	3	_____		
c. Diagnostic tools, utilities and resources						
1). User/installation manuals	1	2	3	_____		
2). Internet/web resources	1	2	3	_____		
3). Training materials	1	2	3	_____		
4). Dr. Watson	1	2	3	_____		
5). Boot Disk	1	2	3	_____		
6). Event Viewer	1	2	3	_____		
7). Device Manager	1	2	3	_____		
8). WinMSD	1	2	3	_____		
9). MSD	1	2	3	_____		
d. Eliciting problem symptoms from customers	1	2	3	_____		
e. Having customer reproduce error as part of the diagnostic process	1	2	3	_____		
f. Identifying recent changes to the computer environment from the user.	1	2	3	_____		
3. Recognize common operational and usability problems and determine how to resolve them.						
a. Troubleshooting Windows-specific printing problems	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
b. Common problems (GPF, BSOD, Illegal operation, Invalid working directory, System lock up, Option or will not function, application will not start or load, Cannot log on to network, Applications don't install, Network Connection)	1	2	3	_____		
c. Viruses and virus types (What they are, TSR programs and virus, Sources - floppy, emails, etc., How to determine presence)	1	2	3	_____		
D. Networks					_____	_____
1. Identify the networking capabilities of Windows. Given configuration parameters, configure the operating system to connect to a network.						
a. Configure Protocols						
1). TCP / IP	1	2	3	_____		
2). IPX / SPX	1	2	3	_____		
3). AppleTalk	1	2	3	_____		
4). NetBEUI / NetBIOS	1	2	3	_____		
b. Configuring Client options (Microsoft, Novell)	1	2	3	_____		
c. Network tools (IPCONFIG, WINIPCFG, PING, TRACERT, NSLOOKUP)	1	2	3	_____		
d. Share resources (Understand the capabilities/limitations with each OS version)	1	2	3	_____		
e. Setting permissions to shared resources	1	2	3	_____		
f. Network type and network card	1	2	3	_____		
2. Identify the basic Internet protocols and terminologies. Identify procedures for establishing Internet connectivity. In a given scenario configure the operating system to connect to and use Internet resources.						
a. Protocols and terminologies (ISP, TCP/IP, E-mail - POP, SMTP, IMAP, HTML, HTTP, HTTPS, SSL, Telnet, FTP, DNS)	1	2	3	_____		
b. Connectivity technologies (Dial-up, DSL, ISDN, Cable, Satellite, Wireless, LAN)	1	2	3	_____		
c. Installing and Configuring browsers						
1) Enable / disable script support	1	2	3	_____		

2) Configure Proxy settings	1	2	3	_____			
3) Configure security settings	1	2	3	_____			
d. Firewall protection under Windows XP	1	2	3	_____			

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
E. Certification						
1. Pass the CompTIA OS Certification test to obtain full A+ certification	1	2	3	_____	_____	_____
F. (Optional Employer Specific Skills)						
5. _____	1	2	3	_____	_____	_____
6. _____						
7. _____						
8. _____	1	2	3	_____	_____	_____

COMPUTER SERVICE TECHNICIAN
Computer Service Technician - Level III
85705JC

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
A. Media and Topologies				
1. Recognize the following logical or physical network topologies given a schematic diagram or description:			_____	_____
a. Star	1 2 3	_____		
b. Bus	1 2 3	_____		
c. Mesh	1 2 3	_____		
d. Ring	1 2 3	_____		
2. Specify the main features for 802.2, 802.3, 802.5, 802.11b and FFDI			_____	_____
a. Speed	1 2 3	_____		
b. Access method (CSMA/CA and CSMA/CD)	1 2 3	_____		
c. Topology	1 2 3	_____		
d. Media	1 2 3	_____		
3. Specify the characteristics (e.g., speed, length, topology, cable type, etc.) of the following:			_____	_____
a. 10BASE-T and 10BASE-FL	1 2 3	_____		
b. 100BASE-TX and 100BASE-FX	1 2 3	_____		
c. 1000BASE-T, 1000BASE-CX,1000BASE-SX and 1000BASE-LX	1 2 3	_____		
d. 10GBASE-SR, 10GBASE-LR, and 10GBASE-ER	1 2 3	_____		

1 - Exposed/not proficient; 2 - Proficient; 3 - Proficient and able to teach others (for further explanation, see the directions page at the end of this document)

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
4. Recognize the following media connectors and/or describe their uses:			_____	_____
a. RJ-11	1 2 3	_____		
b. RJ-45	1 2 3	_____		
c. F-Type	1 2 3	_____		
d. ST (Straight Tip)	1 2 3	_____		
e. SC (Subscriber Connector or Standard Connector)	1 2 3	_____		
f. IEEE 1394 (FireWire)	1 2 3	_____		
g. Fiber LC (Local Connector)	1 2 3	_____		
h. MT-RJ (Mechanical Transfer Registered Jack)	1 2 3	_____		
i. USB (Universal Serial Bus)	1 2 3	_____		
5. Choose the appropriate media types and describe their uses.			_____	_____
a. Category 3, 5, 5e, and 6	1 2 3	_____		
b. UTP (Unshielded Twisted Pair)	1 2 3	_____		
c. STP (Shielded Twisted Pair)	1 2 3	_____		
d. Coaxial cable	1 2 3	_____		
e. SMF (Single Mode Fiber) optic cable	1 2 3	_____		
f. MMF (Multimode Fiber) optic cable	1 2 3	_____		
6. Identify the purposes, features and functions of the following networking components:			_____	_____
a. Hubs	1 2 3	_____		
b. Switches	1 2 3	_____		
c. Bridges	1 2 3	_____		
d. Routers	1 2 3	_____		
e. Gateways	1 2 3	_____		

f.	CSU / DSU (Channel Service Unit / Data Service Unit)	1	2	3	_____		
g.	NICs (Network Interface Card)	1	2	3	_____		
h.	ISDN (Integrated Services Digital Network) adapters	1	2	3	_____		
i.	WAPs (Wireless Access Point)	1	2	3	_____		
j.	Modems	1	2	3	_____		
k.	Transceivers (media converters)	1	2	3	_____		
l.	Firewalls	1	2	3	_____		
7.	Specify the general characteristics (i.e. carrier speed, frequency, transmission type and topology) of the following wireless technologies:					_____	_____
a.	802.11 (Frequency hopping spread spectrum)	1	2	3	_____		
b.	802.11x (Direct sequence spread spectrum)	1	2	3	_____		
c.	Infrared	1	2	3	_____		
d.	Bluetooth	1	2	3	_____		
8.	Specify the general characteristics (i.e. carrier speed, frequency, transmission type and topology) of the following wireless technologies:	1	2	3	_____	_____	_____

B. Protocols and Standards

1.	Identify a MAC (Media Access Control) address and its parts	1	2	3	_____	_____	_____
2.	Identify the seven layers of the OSI model and their functions					_____	_____
a.	Physical	1	2	3	_____		
b.	Data Link	1	2	3	_____		
c.	Network	1	2	3	_____		
d.	Session	1	2	3	_____		
e.	Transport	1	2	3	_____		
f.	Presentation	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
g. Application	1 2 3	_____		
3. Identify the OSI layers at which the following network components operate.			_____	_____
a. Hubs	1 2 3	_____		
b. Switches	1 2 3	_____		
c. Bridges	1 2 3	_____		
d. Routers	1 2 3	_____		
e. NICs (Network Interface Cards)	1 2 3	_____		
f. WAPs (Wireless Access Points)	1 2 3	_____		
4. Differentiate between the following network protocols in terms of routing, addressing schemes, interoperability and naming conventions:			_____	_____
a. TCP/IP	1 2 3	_____		
b. IPX/SPX	1 2 3	_____		
c. NetBEUI	1 2 3	_____		
d. Appletalk / AppleTalk over IP	1 2 3	_____		
5. Identify the components and structure of IP (Internet Protocol) addresses (IPv4, IPv6) and the required setting for connections across the Internet.	1 2 3	_____	_____	_____
6. Identify classful IP ranges and their subnet masks (i.e. Class A, B and C).	1 2 3	_____	_____	_____
7. Identify the purpose of subnetting	1 2 3	_____	_____	_____
8. Identify the differences between private and public network addressing schemes.	1 2 3	_____	_____	_____
9. Identify and differentiate between the following IP addressing methods:			_____	_____
a. Static	1 2 3	_____		
b. Dynamic	1 2 3	_____		
c. Self-assigned (APIPA (Automatic Private Internet Protocol Addressing))	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
10. Define the purpose, function and use of the following protocols used in the TCP/IP suite:			_____	_____
a. TCP	1 2 3	_____		
b. UDP	1 2 3	_____		
c. FTP	1 2 3	_____		
d. SFTP	1 2 3	_____		
e. TFTP	1 2 3	_____		
f. SMTP	1 2 3	_____		
g. HTTP	1 2 3	_____		
h. HTTPS	1 2 3	_____		
i. POP3/IMAP4	1 2 3	_____		
j. TELNET	1 2 3	_____		
k. SSH	1 2 3	_____		
l. ICMP	1 2 3	_____		
m. ARP/RARP	1 2 3	_____		
n. NTP	1 2 3	_____		
o. NNTP	1 2 3	_____		
p. LDAP	1 2 3	_____		
q. SCP	1 2 3	_____		
r. IGMP	1 2 3	_____		
s. POP3/IMAP4	1 2 3	_____		
11. Define the function of TCP/UDP ports.	1 2 3	_____	_____	_____

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
12. Identify the well-known ports associated with the following commonly used services and protocols:			_____	_____
a. 20 FTP	1 2 3	_____		
b. 21 FTP	1 2 3	_____		
c. 22 SSH	1 2 3	_____		
d. 23 Telnet	1 2 3	_____		
e. 25 SMTP	1 2 3	_____		
f. 53 DNS	1 2 3	_____		
g. 69 TFTP	1 2 3	_____		
h. 80 HTTP	1 2 3	_____		
i. 110 POP3	1 2 3	_____		
j. 119 NNTP	1 2 3	_____		
k. 123 NTP	1 2 3	_____		
l. 143 IMAP4	1 2 3	_____		
m. 443 HTTPS	1 2 3	_____		
13. Identify the purpose of the following network services:			_____	_____
a. DNS	1 2 3	_____		
b. NAT	1 2 3	_____		
c. ICS	1 2 3	_____		
d. WINS	1 2 3	_____		
e. SNMP	1 2 3	_____		
f. NFS	1 2 3	_____		
g. Zeroconf	1 2 3	_____		
h. SMB	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
i. AFP	1 2 3	_____		
j. LPD	1 2 3	_____		
k. Samba	1 2 3	_____		
14. Identify the basic characteristics (e.g. speed, capacity, media) of the following WAN technologies:			_____	_____
a. Packet switching	1 2 3	_____		
b. Circuit switching	1 2 3	_____		
c. ISDN	1 2 3	_____		
d. FDDI	1 2 3	_____		
e. T1 / E1 / J1	1 2 3	_____		
f. T3 / E3 / J3	1 2 3	_____		
g. OCx (Optical Carrier)	1 2 3	_____		
h. X.25	1 2 3	_____		
15. Identify the basic characteristics of the following internet access technologies			_____	_____
a. xDSL	1 2 3	_____		
b. Broadband Cable	1 2 3	_____		
c. POTS / PSTN (Plain Old Telephone Service / Public Switched Telephone Network)	1 2 3	_____		
d. Satellite	1 2 3	_____		
e. Wireless	1 2 3	_____		
16. Define the function of the following remore access protocols and services:			_____	_____
a. RAS	1 2 3	_____		
b. PPP	1 2 3	_____		
c. SLIP	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING			DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
d. PPPoE	1	2	3	_____		
e. PPTP	1	2	3	_____		
f. VPN	1	2	3	_____		
g. RDP	1	2	3	_____		
17. Define the function of the following remore access protocols and services:					_____	_____
a. IPSec (Internet Protocol Security)	1	2	3	_____		
b. L2TP (Layer 2 Tunneling Protocol)	1	2	3	_____		
c. SSL (Secure Sockets Layer)	1	2	3	_____		
d. WEP (Wired Equivalent Privacy)	1	2	3	_____		
e. WPA (Wi-Fi Protected Access)	1	2	3	_____		
f. 802.x	1	2	3	_____		
18. Identify authentication protocols:					_____	_____
a. CHAP (Challenge Handshake Authentication Protocol)	1	2	3	_____		
b. MS-CHAP (Microsoft Challenge Handshake Authentication Protocol)	1	2	3	_____		
c. PAP (Password Authentication Protocol	1	2	3	_____		
d. RADIUS (Remote Authentication Dial-In User Service)	1	2	3	_____		
e. Kerberos	1	2	3	_____		
f. EAP (Extensible Authentication Protocol)	1	2	3	_____		
C. Network Implementation						
1. Identify the basic capabilities (i.e. client support, interoperability-authentication, file and print services, application support, and security of the following server operating systems:					_____	_____
a. UNIX / Linux	1	2	3	_____		
b. Netware	1	2	3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
c. Windows	1 2 3	_____		
d. Appleshare IP	1 2 3	_____		
2. Identify basic capabilities needed for client workstations to connect to and use network resources.			_____	_____
a. Media	1 2 3	_____		
b. Network Protocols	1 2 3	_____		
c. Peer and Server services	1 2 3	_____		
3. Identify the appropriate tool for a given wiring task			_____	_____
a. Wire crimper	1 2 3	_____		
b. Media tester / certifier	1 2 3	_____		
c. Punch down tool	1 2 3	_____		
d. Tone generator	1 2 3	_____		
4. Given a remote connectivity scenario comprised of a protocol, an authentication scheme, and physical connectivity, configure the connection on the following servers:			_____	_____
a. UNIX / Linux / MAC OS X Server	1 2 3	_____		
b. Netware	1 2 3	_____		
c. Windows	1 2 3	_____		
d. Appleshare IP	1 2 3	_____		
5. Identify the purpose, benefits and characteristics of using a firewall	1 2 3	_____	_____	_____
6. Identify the purpose, benefits and characteristics of using a proxy service.	1 2 3	_____	_____	_____
7. Given a connectivity scenario, determine the impact on network functionality of a particular security implementation:			_____	_____
a. Port blocking	1 2 3	_____		
b. Authentication	1 2 3	_____		
c. Encryption	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
8. Identify the main characteristics of VLANs (Virtual Local Area Networks).	1 2 3	_____	_____	_____
9. Identify the main characteristics and purpose of extranets and intranets.	1 2 3	_____	_____	_____
10. Identify the purpose, benefits and characteristics of using antivirus software.	1 2 3	_____	_____	_____
11. Identify the purpose and characteristics of fault tolerance:			_____	_____
a. Power	1 2 3	_____		
b. Link redundancy	1 2 3	_____		
c. Storage	1 2 3	_____		
d. Services	1 2 3	_____		
12. Identify the purpose and characteristics of disaster recovery:			_____	_____
a. Backup / restore	1 2 3	_____		
b. Offsite storage	1 2 3	_____		
c. Hot and cold spares	1 2 3	_____		
d. Hot, warm and cold sites	1 2 3	_____		

D. Network Support

1. Given a troubleshooting scenario, select the appropriate network utility from the following:			_____	_____
a. Tracert / traceroute	1 2 3	_____		
b. Ping	1 2 3	_____		
c. Arp	1 2 3	_____		
d. Netstat	1 2 3	_____		
e. Nbstat	1 2 3	_____		
f. Ipconfig / ifconfig	1 2 3	_____		

DUTIES AND TASKS	PERFORMANCE RATING	DATE COMPLETED	INSTRUCTOR'S INITIALS	STUDENT'S INITIALS
g. Winipcfg	1 2 3	_____		
h. Nslookup / dig	1 2 3	_____		
2. Troubleshooting scenarios				
a. Given output from a diagnostic utility (e.g. tracert, ping, ipconfig, etc.), identify the utility and interpret the output.	1 2 3	_____	_____	_____
b. Given a network scenario interpret visual indicators (e.g., link Lights, collision lights, etc.) to determine the nature of the problem.	1 2 3	_____	_____	_____
c. Given a troubleshooting scenario involving a client accessing remote network services, identify the cause of the problem.			_____	_____
1) File services	1 2 3	_____		
2) Print services	1 2 3	_____		
3) Authentication failure	1 2 3	_____		
4) Protocol configuration	1 2 3	_____		
5) Physical Connectivity	1 2 3	_____		
6) SOHO (Small Office / Home Office) router	1 2 3	_____		
d. Given a troubleshooting scenario between a client and the following server environments, identify the cause of a stated problem:			_____	_____
7) UNIX / Linux / Mac OS X Server	1 2 3	_____		
8) Netware	1 2 3	_____		
9) Windows	1 2 3	_____		
10) Appleshare IP	1 2 3	_____		
E. (Optional Employer Specific Skills)				
9. _____	1 2 3	_____	_____	_____
10. _____	1 2 3	_____	_____	_____
11. _____	1 2 3	_____	_____	_____
12. _____	1 2 3	_____	_____	_____

DIRECTIONS FOR COMPLETING THE TRAINING ACHIEVEMENT RECORD

A. When the student performs a task listed in the **"DUTIES AND TASKS"** column, the instructor should rate the student's level of performance by circling 1, 2 or 3 in the **"PERFORMANCE RATING"** column.

Rating Scale:
3- Proficient and able to teach others: The student consistently performs the task accurately without supervision. The student possesses sufficient skill to teach the task to others.
2- Proficient: The student performs the task to industry standards with little or no supervision. This is the minimum performance rating for TAR skill completion.
1- Exposed/not proficient: Student has been introduced to the task, but cannot perform the task to industry standards.

1. If the student performs the task at a level 1, circle the number in pencil so that it can later be erased and entered permanently as a 2 or 3 when the student improves his/her performance. A performance level of 2 is satisfactory (passing) and can be entered permanently or, at the instructor's discretion, circled in pencil to allow the student to improve his/her performance at a later date.

2. When the student performs the task to the instructor's satisfaction, (**at a level of 2 or 3**) circle the appropriate performance rating, and enter the date in the "**DATE COMPLETED**" column. The instructor and student should initial the **DUTY** area when **all the tasks** in that duty area are completed**.**

B. When the student completes the TAR or terminates the program before completing the TAR, the instructor must finalize the TAR by doing the following:

1. Check the appropriate box and enter the date that the student completed the TAR or terminated the training program in the space provided at the top of page 1: (O Completed or O Terminated Training: _____).
Date

2. Complete the Certification/Summary page of the TAR.

C. The final section, **"EMPLOYER SPECIFIC SKILLS,"** is an optional section which can be used to make note of important job skills the student has acquired but are not specifically listed elsewhere on the TAR, or to denote supplemental skills a prospective employer may require of a student before he or she is offered employment.

D. For all students, center staff must record on the *Job Corps Student Profile (Form ETA 6-40)* the O*NET code(s) and completer level(s) achieved.